DOCUMENT RESUME

ED 222 780 CE 034 391

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TITLE Dimensions of Occupational Stress: Implications for Vocational Education.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
PUB DATE Jul 79
NOTE 66p.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Adjustment (to Environment); Coping; *Job Satisfaction; *Organizational Climate; Postsecondary Education; School Role; Secondary Education; *Stress Variables; *Vocational Education; *Work Environment
IDENTIFIERS *Stress Management

ABSTRACT

Since vocational education normally deals with potential workers, it needs to include courses whose content focuses on developing effective coping strategies to deal with occupational stressors that affect job satisfaction. Occupational stress is defined as a dynamic reciprocal relationship between an individual and the work environment. Antecedents, or moderators, of strain that leads to job dissatisfaction are role ambiguity, role conflict, quantitative and qualitative overload, boundary spanning, role responsibility, and personality traits. As the definition of stress implies, stress is caused by a degree of imbalance between a person's needs and skills and the organization's requirements and demands. A model that proposes the congruence of persons and environments in organizations seems appropriate to reduce strain and increase job satisfaction. Determinants of job satisfaction include mentally challenging work, autonomy, variety, task identity, recognition, higher-order need strengths, need for independence, educational levels, participation, and role perceptions. Vocational education needs to provide students with those skills necessary to detect potentially stressful situations and cope with anticipated job stressors and thus improve workers' total effectiveness. (YLB)

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Dimensions of Occupational Stress: Implications for Vocational Education

by

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July 1979

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Acknowledgements

I wish to thank Randall S. Schuler, Associate Professor, College of Administrative Science and Susan Cameron, Assistant Professor, College of Education for their valuable comments both on the draft copy and the formal presentation.

This monograph is the result of having spent the greater part of a year as a Fellow at the Advanced Study Center, National Center for Research in Vocational Education, The Ohio State University. The author gratefully acknowledges the interest and support of Dr. Robert L. Taylor, Executive Director of the National Center, and his staff in making the research possible. A special debt of gratitude is owed to the many individuals who gave their personal assistance and provided the intellectual stimulation that made the time spent at the Advanced Study Center such a memorable experience. The results are solely the responsibility of the author, and if there are errors of fact or interpretation in what has been written, the fault rests entirely with that person and not with the National Center of its staff. On the other hand, much of the credit for this study having been undertaken and the results made available obviously belong to the National Center.

Zona Joyce Hopps

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INTRODUCTION

What does the word stress mean to you? Frequently it conjures up ideas of unpleasant and harmful effects emanating from some environmental event. The popular press often describes it as "the space age sickness." Excessive exposure to stressors can be deleterious to a person's health, but a managable degree of stress can also be a motivator.

Vocational education is work oriented. Many of life's stressors are found in an occupational setting. A model which proposes the congruence of person and environment (P-E) in an organization seems appropriate to reduce strain and increase job satisfaction.

This paper offers a definition of stress and discusses its origins using role theory as a frameowrk. Role ambiguity, role conflict, quantitative and qualitative overload, boundary spanning, role responsibility, and personality traits are described as antecedents or moderators of strain. Determinants of job satisfaction are reviewed to focus attention upon the need to examine both organizational characteristics and individual qualities.

A recent survey on the quality of employment indicated a decline in worker satisfaction. The results are of interest to vocational education whose major focus is to train effective and potentially satisfied employees. Vocational education needs to plan and organize for change. Along with other curriculum modifications, a course in understanding organizations, their

dynamics, and how to deal with stressful events would be a valuable asset on a required basis. This paper suggests various ways of reducing personal stress which would be beneficial for students in helping them learn to cope with stressful events in their lives.

CHAPTER 1

TOWARD A DEFINITION OF STRESS

The literature on stress is replete with definitions and variations in terminology proposed from a broad spectrum of related disciplines. However, the development of stress theory and research emanated from the health sciences. During the latter part of the nineteenth century Claude Bernard, a French physiologist, proposed that all living organisms have the common capacity to "maintain the constancy of their internal milieu despite changes in the surroundings" (Selye 1976, p. 12). Later systematic research conducted by the eminent physiologist Walter B. Cannon provided the roots for the evolution of Hans Selye's concept of stress. Cannon described a "fight or flight response" which activates biochemical mechanisms when the body is exposed to a threatening condition. According to Cannon, increased heart beat, blood pressure, metabolism and breathing rate generate an emergency capacity to flee or fight. In addition, he determined principles of homeostasis which suggested that "the coordinated physiological processes which maintain most of the steady states in the organism have the capacity to remain static (Selye 1974, p. 23).

Hans Selye defines stress as "the nonspecific response of the body to any demand made upon it" (Selye 1976, p. 74). When exposed to noxious stimuli the body reacts in a sequential triphasic manner. This somewhat stereotypical response pattern is referred to as the <u>general adaptation syndrome</u> (G.A.S.).

The initial stage, known as the alarm reaction, is followed by a stage of resistance and a stage of exhaustion representing the body's adaptability in coping with varying intensities and durations of stressful conditions. The energy each individual has to expend on the adaptation continuum appears to be finite. When reservoirs become depleted exhaustion and death ensue. There is also evidence that exposure to varying degrees of life changes and problems within a given period of time heightens susceptibility to health disorders which implies that the indices of stress have a potentially deleterious and cumulative effect.

"Stress is the spice of life," claims Selye. It is associated with all activities from the news of a highly desirable job promotion to an intensely competitive game of chess. It cannot be avoided. Complete freedom from stress is death.

The major thrust of Selye's theory is the delineation of physiological elements within an organism which act as a class (or classes) of stress indicators. From the response syndrome it can be inferred that an environmental stressor has occurred or is occurring. This response-based definition has several weaknesses, particularly for social scientists--first, the inclusion of all life's activities as stress inducing; and second, that all stressors elicit similar intraindividual reactions. Identifying specific environmental factors for further study and imposing meaningful translations on certain physiological responses are imperative for psychosocial research (McGrath 1970).

The Psychosocial stimuli which trigger internal arousal are studies primarily within the psychological and sociological sciences. What follows is a synopsis of some of the major conceptualizations of stress within the occupational domain. Margolis and Kroes (1974) state that job stress is the interaction of both work conditions and employee characteristics which create disruption of psychological and physiological homeostasis. The related environmental circumstances which cause the disruption are defined as job stressors, and the disturbed homeostasis is defined as job-related strain. Margolis and Kroes claim "the concept of factors interacting with the worker is significant" (p. 15). They describe five measurable dimensions of job induced strain: "short term subjective states (e.g. tension, anxiety and anger), persistent chronic psychological responses (e.g. alienation, general malaise, fatigue and depression), transient clinical-physiological changes (e.g. levels of catecholamines, blood pressure, gut mobility), physical health status (e.g. gastro-intestinal disorders, coronary heart disease, asthmatic attacks), and work performance decrement (productivity decreases and task error increase") (pp. 15-16).

The engineering analogy is frequently used in the stress literature--when an external force is applied to an entity it produces an internal strain. The effects of the strain may be both continual and comulative, eventually terminating in a breakdown (McLean 1974). Caplan, Cobb, French, Van Harrison, and Pinneau (1975) adopt this framework when they state that stress encompasses "any characteristics of the job environment

which pose a threat to the individual. Two types of job stress may threaten the person: either demands which he may not be able to meet or insufficient supplies to meet his needs" (p. 3). They define strain as "any deviation from normal responses in the person; (a) psychological strains such as job dissatisfaction, anxiety, and low self-esteem; (b) physiological strains such as high blood pressure and elevated serum cholesterol; and (c) behavioral symtoms of strain such as smoking and dispensary visits" (p. 3). Hall and Mansfield (1971) concur somewhat when they state that "stress is an external force operating on a system, be it an organization or a person. Strain is the change in the state of the internal system which results from this external stress--stress and strain, they are not synonymous."

A comprehensive review and analysis of stress research led Beehr and Newman (1979) to define job stress as "a situation wherein job-related factors interact with a worker to change (i.e. disrupt or enhance) his or her psychological and/or physiological condition such that the person (i.e. mind-body) is forced to deviate from normal functioning." McGrath (1976) proposes a cyclical stress paradigm which is dependent upon several determinants. For a potentially imbalanced and consequently stressful person-environment relationship to exist it must (1) be perceived by the focal person, (2) be appraised in terms of perceived abilities to cope with, avoid, satisfy, remove, or effectively use the situation and, (3) be assessed in regard to the consequences of coping with or avoiding the demand. The model incorporates process linkages between

four stages. Objective situation, perceived situation, response selection, and observable behavior. Effective operation of the total process is contingent upon " (a) the outcome of the prior appraisal process; (b) the organism's past experience; (c) current state (e.g. fatigue); and (d) the contents and organization of the response repertoire and available resources" (McGrath 1976).

The notion of a proper balance between person-environment fit pervades the majority of theories and definitions of stress phenomena. French, Rogers and Cobb (1974) developed a goodness-of-fit model which propounded two types of mutually exclusive conditions. One is the degree to which a person's skills and abilities complement the demands and requirements of the job. A second is the degree to which the person's needs are being satisfied by the job environment. The underlying assumption of both principles is that a misfit will result in job stress. Elaborating on French's needs variable and McGrath's demands, constraints and opportunities concepts Schuler (1979) defines stress as "a dynamic condition in which an individual is: (a) confronted with an opportunity for being/having/doing what she/he desires and/or (b) confronted with a constraint on being/having/doing what she/he desires and for which the resolution of is perceived to have uncertainty but which will lead (upon resolution) to important outcomes." This multidisciplinary proposal indentifies needs and values as critical properties of the physiological, psychological and behavioral components of stress. The opportunity, constraint, and demand dimensions facilitate the evaluation of stressful events in an occupational setting.

The definition of occupational stress used in this paper is as follows: occupational stress is a dynamic reciprocal relationship between an individual and the work environment. The demands and opportunities of the job are complemented by the individual's abilities and skills. In addition, the job environment has sufficient resources to satisfy the person's needs and values. Both requisites can lead to significant consequences for the individual and organization.

Summary

What is stress? this popular work has multiple and complex meanings. Definitions pertaining to occupational stress generally emphasize a person-environment fit. If elements within the environment are conducive to meeting the needs, abilities, and skills of an individual and are perceived as such, certain aspects of the stress syndrome may be reduced.

There are both positive and negative elements of stress. Its direction and intensity are determined by the characteristics of the person and the environment at the onset of the stimulus. Additionally, the effects of stress are additive and cumulative and can lead to the onset of a health disorder.

One of the major difficulties in much of the stress research is that the statistical analysis employed is mainly correlational. This precludes making statements of a casual nature. Individuals respond so differently to environmental stimuli that it becomes almost impossible to make generalizations. McGrath (1976) claims there are six components which appear to be related to stress. They are as follows:

(1) Cognitive Appraisal: The person's interpretation of the objective environment determines the emotional, physiological and behavioral responses to a stressing situation;

(2) Experience: Prior experience with the stressful condition attenuates the effects of stress;

(3) Reinforcement: Prior successes or failures with a task will reduce or enhance the experienced stress;

(4) The Inverted U: There is a nonlinear relationship between the degree of stress and the level and effectiveness of performance. There appears to be an optimal level of stress for each person and each task;

(5) Task Differences: The nature of a task and the relationship of the task to the stressful conditions influence experienced stress, and

(6) Interpersonal Effects: The presence or absence of other persons and their activities influence experienced stress.

These general areas can be helpful in analyzing the nature of stress and its effects upon various individuals.

CHAPTER 2

SOURCES OF OCCUPATIONAL STRESS

The majority of our lives are spent working in or for some type of organization. Although organizational characteristics and dynamics vary widely, they have a profound impact upon human beings who occupy roles within any given structure. To accomplish a set of goals which will ensure productivity, organizations require that workers conform to certain sets of standards. However, rapid technological advancements, increasing bureaucratic restrictions, and greater societal unrest demand modifications in attitudes and behaviors which may affect job motivation and performance. Turbulence is the chief characteristic of the present day environment for organizations in a complex society. Turbulent environments cause changes that affect organizations and workers.

A review of organizational characteristics presents a profile of potential determinants of stress. The theoretical framework adopted for the analysis of environmental stressors in the Kahn, Wolfe, Quinn, Snock and Rosenthal (1964) theory of role dynamics. A role is a set of related activities or behavior patterns that fulfill the expectations or self and others in given contexts. Organizations prescribe official task roles through job titles and descriptions, but roles also have a more informal content consisting of expectations (role expectations) which are communicated (sent role) to the focal person (job incumbent by superiors, subordinates and peers (role set).

Behaviors specifically used to exert influence upon a focal person in the direction of the role set's expectations are known as role pressures. The focal person interprets all communicated expectations within his/her own perceived matrix of motives and job expectations. The resultant behavior will be a reflection of the cognitive appraisal process and covert decision making. Each focal person's response is interpreted by and reacted to by the role set.

Role Ambiguity

Role expectations serve the purpose of defining a person's activities, as well as providing the role set with guidelines for performance predictability and assessment. When incomplete or vague data are available pertaining to role expectations, workers are prohibited from satisfactorily fulfilling the job requirements. This potentially dysfunctional condition is called role ambiguity. Kahn (1974) states "role ambiguity is conceived as the discrepancy between the amount of information a person has and the amount he requires to perform his role adequately" (p. 59).

There appear to be four areas in which ambiguity of role expectations exist: (1) role performance, (2) overall responsibilities, (3) personal style and (4) norms. Surveys conducted to measure the degrees of ambiguity on these four dimensions have included the following items to be rated:

1. The extent to which work objectives are defined.
2. The extent to which one can predict what others will expect tomorrow.

3. The extent to which one is clear on what others expect now.

4. How clear the scope and responsibilities of one's job are (French and Caplan 1972, p. 34).

The initial intensive study to determine organizational causes and individual consequences of role ambiguity and role conflict was conducted by Kahn, et al (1964). They designed two related projects. One was a paired research design using both focal persons and role senders plus data about the organizations in which they worked. Fifty-three males (focal persons) representing a range of jobs from line supervisors to corporate officers were selected from seven business and industrial organizations. The role set consisted of 381 persons whose jobs were functionally interdependent upon those occupied by the focal persons. Their expectations and role pressures therefore defined the roles of the fifty-three focal people. The data were collected from the focal persons by interviews, questionnaires and personality tests. Interviews only, which related to elements of role performance such as role activities, management style, and adherence to organizational norms, were held with the role set.

A national survey was then carried out partially to replicate the intensive study, but essentially to determine the prevalance of role ambiguity and role conflict in the workplace. The sample consisted of 725 members of the labor force who were interviewed as focal persons. They were also asked information about their

role senders and the organization. The results indicate that predictability and clarity are essential factors in eliciting efficient and effective levels of performance and job satisfaction. The following finds illustrate that role ambiguity is a source of job stress among male workers:

- o 35 percent are disturbed by lack of clarity about the scope and responsibilities of their jobs,
- o 29 percent are bothered by ambiguity about what their co-workers expect of them,
- o 38 percent are distressed because they cannot get information required to perform their jobs adequately,
- o 31 percent are disturbed by lack of information about opportunities for advancement in the organization,
- o 32 percent are under tension because they are uncertain about their supervisors' evaluation of them (Kahn, et al 1964, p. 74).

Approximately a third of the population indicated ambiguity as an occupational concern. Both task and socio-emotional aspects of the jobs appeared to be determinants of stress. Task ambiguity refers to a lack of knowledge about what must be done and how to do it. Socio-emotional ambiguity means the lack of information available regarding the procedures of performance evaluation and how the consequences of given behaviors will affect personal goal attainment (Kahn, et al 1974).

A study of the Goddard Space Flight Center (NASA) included 205 male engineers, voluntary administrators and scientists. Sixty percent of the respondents identified role ambiguity as a stressor. Not only was it related to both job dissatisfaction and feelings of mental and physical distress, there was a

significant negative correlation with utilization of intellectual, leadership and administrative skills (French and Caplan 1972).

The research findings indicate that role ambiguity is a prevalent condition in occupational life which has adverse effects on both the organization and the individual. What are the causes of role ambiguity? Several studies have attempted to isolate variables which appear to contribute to this multi-dimensional construct. Two broad categories prevail: (1) organizational characteristics and (2) individual attributes.

Organizational Characteristics

Kahn, et al (1964) hypothesized but did not investigate three potential organization determinants: (1) complexity, (2) change rate, and (3) managerial philosophy. The larger, more complex organizations exceed an individual's ability to comprehend the total operation. Rapid change necessitates reorganization, technological innovations, and modifications in personnel practices. During periods of change, communication to all levels regarding issues is difficult. Consequently such communication is frequently restricted to upper executives. All three conditions considered separately or in combination predispose workers to varying degrees of ambiguity and stress.

House and Rizzo (1972) investigated the relationship between management practices and leadership behavior (mediated by role ambiguity and role conflict) on satisfaction and perceived organizational effectiveness. They identified a set of independent variables which were categorized as (1) formalization practices, and (2) supportive leadership and organizational

practices. The dependent variables were (1) perceived organizational effectiveness, (2) satisfaction, (3) anxiety-stress, and (4) propensity to leave. Perceptions of role ambiguity, and role conflict were the intervening variables.

Instruments were developed to measure twenty-four dimensions of effectiveness in organizational and management practices. They were administered to six corporate staff and fifty-six research, development, and engineering personnel in a large, heavy equipment manufacturing company. The results clearly showed ambiguity consistently negatively correlated with all measures of perceived organizational effectiveness, job satisfaction, propensity to leave, and one measure of anxiety (general fatigue and uneasiness). They concluded that role ambiguity is related to a lack of clear management policies and philosophy, unclear knowledge of performance criteria and standards, insufficient feedback, and inconsistent and changing communications from various management levels.

In an earlier study using a sample of 199 salespeople, first level supervisors, and clerical personnel from the same company, Rizzo, House and Lirtzman (1970) found role ambiguity to be negatively correlated with formalization, planning, coordination of work flow, adaptability to change, adequacy of authority, receptiveness to ideas by top management, adequacy of communication, horizontal communication, and an emphasis on personal development. Both of these works and that done by Kahn, et al (1964) showed that role ambiguity and role conflict are independent constructs, but the effects frequently resemble each other.

Rogers and Molnar (1976) explored interorganizational and extraorganizational variables as antecedents of role ambiguity and role conflict in top-level administrators in county agencies. Accountability, formalization, administrative autonomy, and organizational programs or services were the intraorganizational components. Interorganizational elements were the administrators' perceptions of their own organizations relative to other agencies, the amount of interaction existing, information flow, resources, and overlapping board members. The results indicated that ambiguity correlated negatively with educational services and formalization. It was positively related to authority to spend unbudgeted money and alter responsibilities. For the interorganizational variables when joint decision making occurs, the greater the interaction among directors the less role ambiguity. The investigators conclude that intra-organizational variables as a whole contribute most to role ambiguity.

In a survey of twenty-three occupations including 2,010 workers in seventy-six organizations, Caplan, Cobb, French, Van Harrison, and Pinneau (1975) determined that role ambiguity was positively related to job security and negatively correlated with responsibility for persons, participation, and social support from supervisors and co-workers.

Hamner and Tosi's (1974) finding that role ambiguity was the dominant variable with satisfaction components in the higher occupational groups was confirmed but it was not related

to performance at any level of job. Schuler (1975) used a three-tiered sample in a manufacturing firm--high (professional); middle (middle managers), low (clerical and technicians). He found that role ambiguity was more negatively related to job satisfaction at higher levels than lower levels. He also found that there is an almost equally negative relationship between role ambiguity and job satisfaction at both high and middle levels, but to a lesser degree at the lower level. Although ambiguity is not related to performance at higher job levels, it is negatively related at the middle and lower levels. The findings are interpreted using the ability/adaptation phenomenon. Upper level positions are occupied by individuals who have cognititve skills to comprehend and adapt to un-structured problem solving tasks. The ability to adapt to ambiguity, however, does not necessarily affect job satisfaction positively as was shown. Schuler (1977) further demonstrated that employees at lower levels with great ability coped with ambiguity more effectively.

Person Characteristics

Need for Clarity

The tolerance for ambiguity, or need for role clarity, is a measurable property which varies among individuals. A need for cognition was postulated and experimentally tested by Chehn, Stotland, and Wolfe (1955). They defined need for cognition

> ...as a need to structure relevant situtions in meaningful, integrated ways. It is a need to understand and make resonable the experiential world,

> 'Meaningfulness' and 'integration' are individually defined in that they vary with the person's past experience and capacity for such integration. For any given individual different situations will be differentially important for the arousal and satisfaction of the need. In addition any given situation will have differential importance for the arousal and satisfaction of the cognition need (p. 291).

The data revealed that ambiguous stimuli elicited greater negative reactions, particularly in subjects with a high need for cognition, than did structured situations. Kahn, et al (1964) further explored this variable and demonstrated similar results. They hypothesize that focal persons whose roles are ambiguous for both themselves and their role senders will be exposed to conflicting role pressures. If the individual has the motivational characteristic of high need for cognition, the situation of uncertainty will be extremely stressful.

Different degrees of need for clarity and their relationships between expressed satisfaction, propensity to leave, tension, and voluntary withdrawal were tested by Lyons (1971) using 156 registered nurses. He found significant correlations for the high need-for-clarity group on all measures. The low need-for-clarity nurses, however, showed a strong relationship between role clarity need and job tension only. It was suggested that those persons with a low need for clarity will not be dissatisfied or leave their jobs if greater structure is associated with their roles. Ivancevich and Donnelly (1974) examined differences in need for role clarity index with general job interest, opportunity for job innovation,

job satisfaction facets (self-actualization, autonomy, esteem), job tension, physical stress, and propensity to leave. Their sample consisted of salespeople, supervisors, and operating employees in an electronics manufacturing company. All occupational groups with high need-for-clarity persons showed significant correlations with most of the indices. The most notable correlations for salespeople were role clarity and autonomy (.61), for supervisors, role clarity and physical stress (-.71), and for operating employees, role clarity and job tension (-.78). They concluded that greater job interest, innovation, satisfaction, and less tension and physical stress will be shown by high need-for-clarity persons if more emphasis is placed by supervisors on clarifying their roles.

Locus of Control

Kahn, et al (1964) state that "objective ambiguity is a condition in the environment; subjective or experienced ambiguity is a state of the person" (p. 22). Rotter (1966) speculated that there are individual differences in the degree to which persons believe in internal versus external reinforcement. Persons who consider their environment to be a result of their own actions and within limits of their own self-control believe in internal control. Those who consider events to be independent of self-control and dependent upon other influential forces such as people, luck, or fate believe in external control. Locus of control, ambiguity, and employee behavior have been researched by Organ and Greene (1974) and Szilagyi, Sims and Keller (1976). Less role ambiguity and higher levels of job

satisfaction were experienced by "internals" according to Organ and Greene. The Szilagyi et al (1976) study was designed to investigate the relationship between locus of control, role ambiguity and role conflict, and satisfaction and performance for different occupational levels in a medical and business setting. The results support those of Organ and Greene (1974) that knowledge of information about the job and role perceptions are related to the person's belief system.

Summary

Ambiguity is a fact of life in modern organizations. The size, complexity, rapidly changing technology, and essential personnel changes make management philosophy, policies, and procedures critical elements in dealing with worker uncertainties. The employee's perception of the discrepancy between objective and subjective environments show that role ambiguity is a prevalent and critical variable in job satisfaction, health, and performance.

A total absence of role ambiguity, however, is not to be considered the ideal state. If detailed specifications were outlined for all activities, there would be a total lack of freedom. This type of situation would create frustration and inhibit performance. Some level of compatability needs to be achieved between organizational characteristics and individual needs.

Role Conflict

Role conflict, like role ambiguity, is an expectation-generated stressor. Many of the concepts, such as formalization, personality traits discussed in connection with role ambiguity are applicable to role conflict. Role conflict is defined as "the simultaneous occurrence of two or more sets of pressures such that compliance with one would make more difficult compliance with the other," (Kahn et al., 1964). There are several types of role conflict:

1. Intra-sender conflict--occurs when incompatible requests are received from one member of the role set. Fox example, the boss requests a secretary to type, reproduce, compile and bind a 2000 word document for the Board of Directors in one hour.

2. Inter-sender conflict--occurs when pressures from one role sender are in opposition to role pressures from one or more senders and occur at the same time. The family has planned a birthday dinner and entertainment when the boss arranges an emergency executive meeting.

3. Inter-role conflict--occurs when pressures of being a member of one role set conflict with those of another role set. A woman attempts to be successful in a career, as a homemaker, mother and community service worker.

4. Person-role conflict--occurs when demands are made which are incompatible with one's needs, values, or skills. A person is asked to engage in a conspiracy against a fellow worker.

5. Role overload--occurs when a person is faced with too many tasks to accomplish in too limited a time span. For example, one individual is operating a large academic department while writing a book, doing research, and teaching two undergraduate classes.

Research by Kahn et al. (1974) indicated role conflicts are the most frequent source of organizational stress. Forty-

eight percent of the national sample indicated inter-sender role conflict with 88 percent experiencing role pressures from organizational supervisors. Fifty-nine percent of all inter-sender conflicts arise from groups, such as labor unions, or persons, such as business associates, outside the organizational structure. The Goddard Space Flight Center study showed that 67 percent of the male employees experienced some type of role conflict.

Role conflict is a multivariate construct. Two individuals may experience what is identified as role conflict but the nature and origins of the conflict are dissimilar. The following discussion will attempt to dichotomize role conflict into organizational factors and individual characteristics.

Causes of Role Conflict

Organizational Characteristics

The House and Rizzo (1972) study described earlier found role conflict to be strongly related to supportive leadership and organizational practices which were the independent variables. It was also strongly associated with the dependent variable of perceived organizational effectiveness. The correlations found in this study suggest that one of the major functions of a leader is to attenuate role conflict even when organizational climate is not supportive.

Kahn, et al. (1964) discovered role conflict showed an incremental increase beginning at the lowest occupational levels, reached its peak at middle management, then tapered off somewhat at the upper executive levels. The explanation offered for this

pattern resides in the motivational configuration of middle management. These people desire status, outstanding accomplishments, and security. McClelland, et al. (1958) differentiated status-achievement and expertise-achiever concentrates on high levels of accomplishment on all job related activities regardless of potential rewards. A security oriented person desires to maintain a presently held job or one which is higher, but readily attainable, in order to maintain basic material requirements. Status-oriented people are the most vulnerable to role conflict perhaps due to the strength of their job-involvement and the importance they place on their position relative to other aspects of life. In addition, they are acutely aware of evaluative comments, particularly from superiors. The expertise-achiever disassociates from role senders when under role conflict, although tension levels almost equal those of the status-achiever. The security oriented person has much less role conflict because the demands that are made are usually of a dependency nature. There is a strong desire for approval, and greater power is usually attributed to associates.

Role conflict in organizations often originates from the degree of relationship role senders have with the focal person. Kahn et al. (1964) identified three forms of role relations: (1) functional dependence, (2) organizational proximity, and (3) relative status. The results of their research showed role conflict is greatest between role senders and the focal person in the same department; role senders who are moderately dependent upon a focal person appear to apply the greatest role

pressure. The greatest amount of role pressure emanates from the immediate supervisor. The reasons for greater role pressures and conflict between the immediate supervisory and focal person are the more accurate knowledge and awareness the supervisor has of the subordinate's performance as well as the functional dependency in the relationship. It should also be noted that the direct superiors appear to be perceived as having the critical legitimate reward and coercive powers over focal persons.

Miles (1976) investigated the level of role conflict exhibited by focal persons in supervisory capacities. He found the extent of supervision required was directly related to the degree of inter-sender and general role pressures. Miles and Perrault (1976) divided role conflict into five distinct conflict orientations. They determined that several combinations of role requirements evoke differentiated degrees of conflict and exist along an additive continuum. The antecedents of role conflict which were analyzed were: (1) personnel supervision, (2) boundary spanning and integration, (3) proximity and authority of role senders, and (4) research activities. They suggest techniques such as careful personnel selection and placement, leadership development, and job redesign both for potential and present employees.

The national survey conducted by Caplan, Cobb, French, Van Harrison, and Pinneau (1975) reported role conflict to be positively related to work load, work load variance, and undesired overtime hours. A negative relationship existed with perceived pay equity and superiors' social support. Brief and

Aldag (1976) used a sample of nursing aides and assistants and found role conflict to be negatively related to satisfaction with work tasks, satisfaction with supervisor, and self-perception of work quality. Also, they found a negative correlation with task identity, defined as the degree of completion of a meaningful part or a whole project; and autonomy, which was the degree of freedom allowed within the job. Cowen (1961) claimed role conflict was magnified following graduation from all types of training programs for nurses.

An examination of the effects of conflict and pressures on satisfaction in career choices of married women was done by Hall and Gordon (1973). Their sample consisted of full time and part-time employed women and full-time homemakers. They claimed that the two employed groups experienced more conflict than the homemakers. The greatest conflict existed among the part-time workers, with the home pressures being the primary contributor. Part- time employed women experienced the greatest number of role conflicts imposed by self, time, and non-home commitments. Despite the numerous conflicts, full-time employed women reported greater satisfaction than either homemakers or part-time employed.

Boundary Spanning

Boundary role positions within the organizational structure may cause role conflict because of the unique characteristics attendant to them. A boundary position is defined as one where the occupant has significant role sets which are both internal and external to an organizational unit or to the total organization.

The following are examples of boundary positions: personnel recruiters, marketing and salespeople, purchasing agents, advertising and public relations personnel, purchasing agents, and department coordinators. The bonds which are created, both psychologically and organizationally, are often stronger between the focal person and role senders in the external environment than those established within the parent organization. This is partially due to the close proximity and numbers of people contacted outside the organization as compared to inside.

One major difficulty a boundary spanner has is creating and maintaining strong positive relationships with the external world. No formal power is usually vested in a boundary role's requirements, so guarantees of performance from within or outside the organization can be tenuous. The result is that a single occupant's performance is evaluated based on external and internal circumstances over which the focal person has little control. Extreme stress can be experienced by boundary spanners, so roles should be as explicit as possible. In addition, it is advisable to create multiple boundary spanning roles to be distributed across several persons which will help in distributing the stress among them and diffuse role conflict. Kahn et al. (1964) in their intensive study report 68 percent of boundary spanners were above the median in role conflict. Only 32 percent of the people in the positions not related to an organizational boundary reported similar role conflict.

Miles (1976) in a study of the relationship between role stress and role requirements in integrators and boundary spanners

claimed that general role conflict and inter-sender conflict were directly related to role activities performed by occupants of those positions. He also found that both conflicts were greater for integrators and boundary spanners than for focal persons in supervisory positions.

Role Overload and Role Underload

The prevelance of role overload as a job stressor among members of the labor force, according to Kahn et al. (1964) is relatively high. They claim "forty-five percent of male wage and salary workers indicate being disturbed about 'feeling that (they) have too heavy a workload, one that they can't possibly finish during an ordinary work day' and forty-three percent are distressed by 'thinking the amount of work (they) have to do may interfere with how well it gets done,'" (p. 59).

Role overload and underload are closely affiliated with role conflict and ambiguity and can be analyzed as emergent side effects. Role overload is a state in which the focal person is required to complete too many or too difficult a set of tasks in a given time period. Role underload is a condition where the required set of tasks does not adequately satisfy the individual's capability or fit the time allotted for completion. Overload and underload are differentiated along a continuum into quantitative and qualitative components. The quantitative (too much work to complete) and the qualitative (the work is too difficult) both generate tension but may have differing effects in various occupations. French, Tupper, and

Mueller (1965) studied quantitative and qualitative overload in university professors and administrators using interviews, questionnaires, and medical examinations. Their findings indicate that both forms of overload are related to job tension. Quantitative overload related to low self-esteem in administrators but not professors. Qualitative overload was related to low esteem in professors. Additionally, when the data for achievement orientation (drive for achievemant, hours worked, activities pursued, leadership tasks) were examined, both samples showed elevated serum uric acid levels in the blood. Research has shown that this chemical tends to be higher in persons with greater need achievement orientations. There is also evidence that it is linked with coronary diseases.

The relationship between quantitative and qualitative underload and overload was the focus of a study by Frankenhaeuser and Gardell (1976). They examined both social and psychophysiological factors. The social variables were those related to the individual's opportunity for self control of job related tasks as well as those permitting a holistic evaluation of the required work. Measures of catecholamines (secretion of adrenalin or nonadrenalin) were used as psychophysiological indices. The sample consisted of sawmill workers engaged in machine-paced and person-paced work. The results showed that "the crucial stressor is the demand on the worker to make skilled and economically important decisions in an extremely short time, at a pace completely set by the machine system" (p. 44). The negative effects of mechanization are manifested in increased

production of catecholamines, expressed frustrations, and lowering of self-esteem. The researchers state "the work is not only characterized by quantitative overload by also qualitative underload, owing to the fact that the worker's skill is constantly underutilized" (p. 44).

Sales (1970) conducted a laboratory study which simulated actual work conditions of role overload and underload. His independent variables were the completion of different numbers of anagrams in specified time intervals from which physiological, psychological, and behavioral measures were obtained. He used objective and subjective workloads. Objective workload was the actual number of anagrams presented, subjective workload was the subject's perception of the quantity of work required. The results show significant differences between overload and underload on most variables. Overload caused greater productivity with more errors, increased subjective workload, tension, anger, and increased heart rate but decreased self-esteem. Subjective workload was related more to subjects' reports of increased tension and anger but also to greater task enjoyment. All high anxiety subjects reported lower self-esteem and more tension and anger which was interpreted as the "fear of failure" phenomenon. Heart rate in high anxiety subjects showed increases in overload conditions, but decreases in underload settings. High need-achievement persons showed attempts at increasing productivity, although they expressed feelings of greater time constrictions. The comparative analysis between high and low achievers substantiates the inverted U-shaped stress curve. In overload conditions, high need achievers reach their peek and deceleration occurs.

Role Responsibility

The effects of accepting responsibility for people and things has attracted the attention of investigators during the past few years. Emoluments of considerable magnitude are usually conferred on individuals willing to accept positions requiring considerable responsibility. Recently, however, it has been recognized that job openings requiring extensive role responsibilities frequently remain vacant for considerable periods of time. Why? Are the prestige, perquisites, and actual remuneration no longer such powerful enticements compared to the qruelling effects on personal health?

French and Caplan (1972) reported that approximately 59 percent of the Goddard Space Center workers maintained responsibility for people and 59 percent for things. Respondents who claim responsibility for people reported significant amounts of time spent interacting with people and minimal time devoted to private work. They also stated pressures stemming from critical deadlines place constraints on normal schedules. This combination of pressures, particularly if the responsibility is closely related to people's futures, affects blood pressure, cholesterol levels, and smoking (if one smokes).

Cobb (1972) reports studies in which foremen and executives have a higher incidence of peptic ulcers than lower echelon workers.

Person Characteristics

Kahn et al. (1964) incorporated personality variables into their analysis of organizational stress. They claim role

senders' communications vary according to traits they perceive in the focal person. There are also differences in stress tolerance and styles of coping with conflict which are determined by personality variables. Emotional reactions to conflict situations by anxiety-prone persons tend to differ somewhat from those who are less vulnerable. The reactions, however, are often only a matter of magnitude. For example, similar physiological symptoms are reported by most people in perceived conflict situations. Individuals with more of a neurotic anxiety syndrome, however, seem to experience greater negative effects on self-esteem and self-confidence.

The extroversion-introversion dimension of personality may affect a focal person's reactions to conflict situations. An introvert tends to use withdrawal techniques when confronted with role conflict. The tendency is to appear independent and unsociable and reduce communication channels. Under these conditions role senders frequently intensify their role pressures, although usually with moderate success, causing extreme stress for the focal person. An introvert perceives role senders as having less power when confronted with severe conflict although such is not the case when conflict subsides. Extroverts usually are more communicative and often more realistic about environmental events. They experience a loss of confidence and trust in as well as respect for colleagues in high conflict situations.

A third personality dimension suggested by Kahn et al. (1964) is that of flexibility-rigidity. A person characterized as rigid tends to be authoritarian and inner-directed. In an organization, the behavior patterns exhibited indicate complete

dedication and commitment to goals and responsibilities. Assigned tasks need to be highly structured, and the job stable and orderly. When faced with role conflict, the rigid person frequently rejects input and closes communication channels. The flexible person is other-directed, open, and emphasizes a particular style. These people are conductive to accepting change and seek positions which offer variety and comradeship. This type of person is exposed more frequently to role conflict than the rigid individual because of greater job involvement. The response to conflict creates more anxiety in the flexible than in the rigid person, and the former has a strong desire to correct matters. The characterization of a Type A behavior pattern evolves from the work of Friedman and Rosenman (1959).

The Type A syndrome is one which is characterized by extremes of aggressiveness, competitiveness, achievement seeking, hostility, time urgency, and restlessness which most frequently are directed toward gaining upward mobility in a chosen occupation. Many of the behavior patterns exhibited by Type A are those which Kahn et al. (1964) would identify in high-anxiety, status-oriented focal persons. Medical evidence suggests that individuals who are categorized as "Type A" have "coronary-prone behavior patterns" which may predispose them to coronary diseases (Jenkins, L974).

Summary

There are different forms of role conflict which may have their origins in organizations or individuals. Manifestations

of role conflict are exhibited in physiological, psychological, and behavioral changes in an individual. Characteristics of personality may predispose a person to the frequency and degree of role conflicts they encounter. The fact that there are wide individual differences in the nature of perceived role conflict may be accounted for in part by personality variables. Research indicates role conflict affects job satisfaction and performance. Positions which require persons to cross organizational boundaries create potential role conflict.

Quantitative and qualitative role overload and underload appear to be a relatively universal facet of organizational life. Studies have shown that exposure to differing types and degrees of "load" conditions has potentially harmful physiological, psychological, and behavioral effects. Mechanization in modern industry appears to be a precipitating factor in reducing self-perceived skill utilization. Quantitative overload is usually organizationally determined and partially a reflection of personal qualities. Need achievement, flexibility-rigidity, anxiety level, and value orientations are mediating factors of overload as a stressor. Roles which involve responsibility for people appear to cause more conflict than those in which the primary responsibility is for things.

CHAPTER 3

PERSON - ENVIRONMENT FIT

Most of the definitions of stress imply that there is a degree of imbalance between a person's needs and skills and the organization's requirements and demands. French, Rodgers and Cobb (1974) developed a theory which encompassed conceptual relationships of "fit" and the consequences of "misfit". They hypothesized that a person-environment (P-E) fit has two essential characteristics: (1) the extent to which an individual's skills and abilities are congruent with the requirements and demands of the job, and (2) the extent to which the organizational environment provides supplies to meet the individual's needs. A differentiation is made between the person and the environment which exists independently of the person's perceptions of self and environmental events. The objective environment includes those objects which are independent of a person's perception, for example, the physical and work surrounding. The subjective environment is causally related to the objective environment. It represents the individual's perception or psychological interpretation of environmental events such as the supplies that are available to meet specific needs.

The model also includes the concepts of objective person which refers to such enduring attributes as needs, values, and abilities. The subjective person represents the self-concept and perceptions of individual needs and values relevant to the occupational surroundings. Two additional concepts are incorporated into the model which describe possible perceptual inaccuracies.

Between the objective and subjective environments a contact with reality refers to any discrepancy between the two concepts. Accuracy of self assessment is the discrepancy between the objective person and the subjective perception of self. A P-E fit can be measured objectively or subjectively--between subjective environment and subjective person. The dimension commonly used as an example is typing ability. A secretary can actually type fifty words per minute (objective person) but thinks sixty words are being typed (subjective person). The secretary's boss expects eighty words per minute (objective environment) but the secretary believes the boss wants seventy words per minute typed (subjective environment).

The theory can be used to conceptualize the dynamics occuring from multiple perspectives within the organizational setting. Cognitive appraisal is essential to the total process (McGrath, 1976; Lazarus, 1966). Individuals will assess and predict forthcoming events based on their past experiences and perception of present conditions. The satisfaction of needs and values is a primary force in determining the degree of job satisfaction or dissatisfaction (strain). Motive arousal constitutes the mediating variable leading to psychological and physiological responses. Strain occurs when the motives and abilities in the subjective P-E fit are incongruent with the supplies and demands.

French et al. (1974) have derived formulae based on the difference between the environmental score and the individual's desire, on the same dimension, to determine discrepancies and

goodness of fit. For example, the difference in role ambiguity can be evaluated by assessing the ambiguity which exists in the environment compared to that which the individual can tolerate comfortably. If a perfect fit occurs, there will be no discrepancy. Figure 2 illustrates a hypothetical P-E fit curve.

Zero indicates the individual is satisfied with what is available (congruence). The negative numbers indicate a discrepancy in which the environmental supplies are insufficient to meet the person's needs. The positive numbers represent an excess in environmental supplies. This model suggests a curvilinear relationship as opposed to one which is linear. The curves represent different types of variables. Curve A suggests that strain increases when supplies are deficient to meet needs but an excess of supplies does not increase strain. For example, a person without sufficient monetary rewards commensurate with needs experiences strain; however, large reimbursements do not increase strain. Curve B, however, represents a hypothesis that both deficiencies and excesses in supplies compared to needs induces strain. The need for affiliation versus the need for privacy is an example of Curve B. Opportunities for maximum affiliation increase strain; however, when conditions are arranged to increase privacy, strain does not decrease but begins to increase.

Tests of these hypotheses were conducted by French and Caplan (1972) at the Goddard Space Flight Center. They used the dimensions of responsibility for people versus things, quantitative

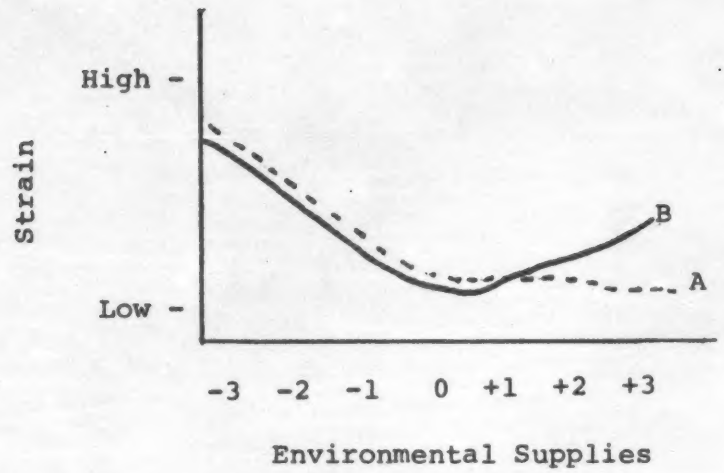

Figure 1. Two hypothetical P-E fit curves.

and qualitative workload, role ambiguity, relations with subordinates, participation and advancement opportunities. They found that measures on the various dimensions supported the proposed model. The plotted discrepancy scores indicated an inverted U for most measures, showing that strain increases when there is too little or too much of what is desired.

Proponents of the P-E fit model argue that the less discrepancy between what is required by organizational elements and the degree of satisfaction of individual needs the more job satisfaction increases and stress is reduced. Congruence between P-E fit should be individually determined--people's perceptions of events differ. The underlying assumption of role theory, applied to organizational settings, is that stressors such as role ambiguity, role conflict, boundary spanning activities, role overload and underload, and role responsibility are mediated by personality traits and can predispose workers to psychological and physiological strains with a potential disease outcome.

Job dissatisfaction, tension, low self-esteem, and low self-actualization are outcomes associated with psychological strain. Some behavioral indications of stress are increased smoking and alcoholic intake, marked weight fluctuations, short attention span, somatic complaints, absenteeism, turnover, grievances, and strikes. Job satisfaction or dissatisfaction is the variable most frequently related to psychological and behavioral outcomes in both people and organizations. It is that factor and its multiple components that will be discussed

in the remainder of this chapter.

The research interest in job satisfaction and motivation is indicated in a recent publication by Walsh and Birkin (1979) in which 946 annotated entries appear. Although there has been a plethora of research in the area, Lawler (1973) claims that minimal knowledge exists about job satisfaction. He states the reason for this discrepancy is that studies conducted to explore job satisfaction properties appear to be either theoretical in approach or they use a research design which prohibits an analysis revealing causal relationships.

The two theories which appear most germane to the P-E fit model are discrepancy theories (Locke, 1969, 1976; Porter, 1961; and Lawler, 1973) and equity theory (Adams 1963, 1965). Locke's discrepancy model focuses upon the difference between an individual's desires, the degree of importance of those desires, and what the individual perceives as provided by the environment. The greater the discrepancy the greater the dissatisfaction. Locke (1969) claims "Job satisfaction or dissatisfaction is a function of the perceived relationship between what one wants from one's job and what one perceives it is offering" (p. 316). A later definition states "Job satisfaction may be defined as a pleasurable or positive emotional state resulting form the appraisal of one's job or job experiences" (p. 1300). Equity theory (Adams 1963, 1965), although essentially a motivational framework, postulates that satisfaction is directly related to the perceived ratio of job input to job reward. Adams

assumes that under- and over-reward cause dissatisfaction (curve B in P-E model). Both theories emphasize the importance of an individual's perceived outcomes compared to some additional outcome. Discrepancy theory defines the additional outcome as what a person wants or thinks should occur. Equity theory defines the additional outcome in terms of a comparison between the perceived input relative to other worker's input and outcomes.

A model which encompasses concepts from both discrepancy and equity theories and claims to be able to evaluate both facet satisfaction (i.e. pay, workload, supervision) as well as overall job satisfaction has been proposed by Lawler (1973). Satisfaction is defined as a condition where a person's perceptions of what should be received are similar to what is perceived as actually being received. If there is an imbalance between either side of the equation, dissatisfaction results. When perceived job inputs (skills, abilities, job behaviors) are high, the person will anticipate high perceived outcomes which are related to job demands. In addition, a person's perceptions are influenced by comparing self inputs and outcomes with similar factors in other workers.

Lawler (1973) says five circumstances exist which would cause dissatisfaction:

1. People with high perceived inputs will be more dissatisfied with a given facet than people with low perceived inputs.
2. People who perceive their job to be demanding will be more dissatisfied with a given facet than people who perceive their jobs as undemanding.
3. People who perceive similar others as having a more favorable input-output balance will be more satisfied with a given facet than people who perceive their own balance as similar to or better than that of others.

4. People who receive a low outcome level will be more dissatisfied than those who receive a high outcome level.

5. The more outcomes a person perceives his comparison-other receives, the more dissatisfied he will be with his own outcomes. This should be particularly true when the comparison-other is seen to hold a job that demands the same or fewer inputs. (Lawler, 1973, p. 77).

Determinants of job satisfaction are a function of the interaction between a person and the environment. In a work setting the organization matrix consists of relationships between roles, tasks, and climate coupled with individual needs and values. Hackman and Lawler (1971) conducted an extensive survey of 208 telephone employees in thirteen different jobs to test the effects of intrinsic motivation on performance. The independent measures used were: (1) variety, (2) autonomy (3) task identity, (4) feedback (called core dimensions), (5) dealing with others to complete the work, (6) friendship opportunities, and (7) higher order need strengths (needs for personal growth, development, and accomplishment). Satisfaction, performance, and absenteeism were the dependent variables. The results showed that jobs rated high in the four core dimensions caused workers to take greater responsibility, perform more effectively, and do higher quality work. In addition, the core dimensions were positively related to job satisfaction, and fewer absences were recorded. Dealing with others and friendship opportunities, however, showed no significant relationship with any of the dependent variables. The results showed that jobs rated high in the four core dimensions caused workers to

take greater responsibility, perform more effectively, and do higher quality work. In addition, the core dimensions were positively related to job satisfaction, and fewer absences were recorded. Dealing with others and friendship opportunities, however, showed no significant relationship with any of the dependent variables. It was also clearly evident that when jobs were high on all the core dimension aspects of satisfaction, intrinsic motivation and performance were also high. Individuals who had higher order-need strength responded more positively to jobs in a higher level than did those persons with lower order-need strengths. The results of this study indicate the need to be cognizant of different individual and job characteristics when designing or enlarging jobs. Hackman and Oldham (1975) developed a job diagnostic survey based on the findings of the earlier work.

A prominent causal factor, either implied or directly connected with job satisfaction, is the need to utilize cognitive abilities. Facets such as opportunities for innovative problem solving, responsibility for planning and organizing one's own work, and advanced learning provide mental challenges. Greater challenges usually require considerable effort, involvement, and commitment to goals. Challenges which are too difficult cause dissatisfaction. Wanous (1974) found that higher order-need strengths correlated more highly than either the Protestant work ethic or urban versus rural background variables on eight of twelve items used to measure job characteristic reactions. Seybolt (1976) examined the moderating effects of educational level on work environment characteristics and job satisfaction. He reports

that persons with grade school education employed in jobs with limited variety were more satisfied than those with a high school education occupying similar jobs. College educated individuals were less satisfied in jobs with little complexity compared to grade school level individuals in comparable jobs. (1976) states:

> The individual with lower education and therefore lower expectations will be satisfied when his lower expectations are met and will be less satisfied than the more highly educated individual in a job which offers more 'inducements' than he expects. (p. 74)

Recognition, especially among blue collar workers, appears to be one of the single most important factors causing job satisfaction (Locke, 1973). This is a method of feedback providing an employee with valuable information hopefully to produce a more effective worker. Role ambiguity, as discussed earlier, can be detrimental to self-esteem and performance.

The need for achievement and need for independence were used as moderators by Johnson and Stinson (1975) in studying role ambiguity, role conflict, and job satisfaction. They found that high need achievers are goal oriented and complete tasks rapidly. They tend to emphasize success and doing one's best. The researchers found that high need achievers experience more dissatisfaction when tasks are ambiguous than do low need achievers. They also encounter greater inter-sender role conflict which causes less efficient task completion. High need for independence persons are characterized by their desire to act in accordance with their own judgements and evaluations and

their tendency to question rules and resist orders. The data in this study show a negative relationship between high-need-for-independence individuals and inter-sender conflict and less dissatisfaction with ambiguity.

Participation in decision-making activities which affect the organization and the individual's job has been shown to reduce role conflict and role ambiguity and to increase job satisfaction. The Goddard Space Flight Center study indicated that participation reduced role conflict, increased administrative and nonadministrative talents, improved attitudes and self-esteem, and was positively related to job satisfaction (French and Caplan, 1972).

Schuler (1977) undertook research to explore the effects of participation in decision making at different organizational levels. He found that both perceived role conflict and ambiguity were affected by participation, particularly at lower organizational levels. Increased work satisfaction was shown as a result of increased participation. Higher levels of satisfaction and performance have been found to be associated with lower levels of perceived role conflict and ambiguity (Schuler, et al., 1977). In a second study, Schuler (1979) investigated how participation operates to improve job satisfaction using a role and expectancy model. The argument presented is that participation in and of itself is not the determinant of satisfaction and performance but it is the knowledge acquired about necessary work efforts (effort-performance) and the behaviors that will or will not be rewarded in work (performance-reward) that are the

influencing variables. The data showed a negative relationship existing between participation and role conflict and ambiguity; a positive relationship between participation and performance-reward expectancy, and between satisfaction with supervisor and overall job.

Fourteen sources of occupational stress (too little authority, overload, too slow job progress, making decisions that affect others, can't get necessary information, etc.) and twelve facets of job satisfaction (job security, job advancement, acquisition of new skills, etc.) were examined in three professional groups (Burke, 1976).

The greatest occupational stressors were (1) failure to get information necessary to do a satisfactory job, (2) job progress was too slow, and (3) work overload. When occupational stressors were correlated with job satisfaction indices, the greatest positive correlations were found between

1. "too little job security and responsibility" and "little freedom to use own ideas";
2. "unclear about job duties" and "little freedom to use ideas"
3. "unclear about promotional opportunities" and "fair evaluation of what I accomplish" and
4. "don't know where I stand with my boss" and "fair evaluation of what I accomplish on the job." (Burke, 1976, p. 239).

The conclusions drawn from this research are that

certain occupational stressors are dysfunctional and unpleasant while others are conducive to satisfaction and effectiveness. This data also fits the P-E model.

Schuler (1979) has suggested a multidisciplinary approach which focuses on the assessment of individual needs and values and how they determine a person's perceptions of organizational conditions. The degree of stress experienced is related to the number, content, and intensity of conditions being experienced simultaneously. It is also closely associated with the person's evaluation of outcome importance and degree of resolution uncertainty. Individual needs and values, abilities and experiences, and personality characteristics affect perception of organizational opportunities, constraints, and demands as well as the selection of stress reduction methods. Schuler postulates that the discrepancies between a person's desired levels of various needs and values and the extent to which they are actually being recognized in an organization are stress measures. The P-E model in stress studies examines specific organizational stressors as causal agents of strain and individual qualities as moderators. Schuler's model has considerable merit in that it incorporates both organizational characteristics and individual qualities as stress determinants. Experimentation to test the hypotheses should provide new insights into stress induced variables and their relationships.

Summary

A model of P-E fit which proposes congruence between an individual's skills and abilities related to job demands coupled with a reciprocity in complementary environmental supplies seems

appropriate for examining job satisfaction. Discrepancy theories are frequently used in research studies to test facets of job satisfaction or overall satisfaction. Job satisfaction is defined as an affective state which results from job assessment. The degree of satisfaction depends upon the individual's perception of how the environment is fulfilling important needs and values. Values should be compatible with needs. Organizational and individual factors contribute to the attainment of the job satisfaction. Variables which have been examined are: (1) mentally challenging work, (2) autonomy, (3) variety, (4) task identity, (5) recognition, (6) higher order need strengths, (7) need for independence, (8) educational levels, (9) participation, and (10) role perceptions. The consequences of job dissatisfaction are personal strains exhibited through physiological, psychological, and behavioral changes.

CHAPTER 4

IMPLICATIONS FOR VOCATIONAL EDUCATION

> Vocational education is not a separate discipline within education...it cannot be meaningfully limited to the skills necessary for a particular occupation. It is more appropriately defined as all of those aspects of educational experience which help a person to discover his talents, to relate them to the world of work, to choose an occupation, and to refine his talents and use them successfully in employment. (from "Vocational Education: A Bridge Between Man and His Work" 1968)

Work is an integral part of a total lifestyle. Contemporary workers appear to emphasize the quality of life, which is not necessarily keyed to the acquisition of material possessions and economic growth. It is a composite of multiple factors generating what is referred to as the human affective experience. The positive and negative psychological encounters with organizations can have profound effects on workers' lives and ultimately, on society. Humanistic psychology has had a significant impact upon the development of strategies to analyze job satisfaction as a determinant of the human affective experience.

A recent survey by Quinn and Staines (1979), using a representative sample of employed adults in all occupations and industries in the United States, compared 1969, 1973 and 1977 data on job satisfaction. On a life satisfaction index a significant decline was indicated from 1969 to 1977, but particularly between 1973 and 1977. The researchers attribute these findings to an "unfulfilled rise in expectations that workers have regarding their jobs," (p. 308). Negative results were reported between expectations and realities on three indicators: (1) skill underutilization,

(2) "overeducation" for the job, and (3) educational level. For the first time, these researchers attempted to determine the relationship between work, leisure activities, and family life. They purport that time and energy are the critical elements in causing dissatisfaction between work and non-work. Work schedules being inconvenient or ambiguous and lack of time essential to complete work, create role conflicts and diminish energy levels necessary for the enjoyment of non-work activities. These specific facets, as well as overall job satisfaction, were investigated. Particularly between 1973 and 1977, a decline in overall job satisfaction was found. Significant declines were especially evident for comfort, challenge, financial rewards, resource adequacy, and promotions, but not for relations with co-workers. The composite index of job satisfaction between 1973 and 1977 represented consistently significant declines among all age groups, races, education levels, regions, and occupations.

What do these findings signify for vocational education? In this rapidly changing technological society shall we continue to teach functional work skills and exclude social intervention? Is there a critical need to educate for change? Even though the future is capricious, shouldn't vocational education be planning and preparing for 2002? Accolades abound for individualized, competency-based curricula; performance profiles; and community assessment tools, but what about teaching a person strategies on how to deal effectively with organizations?

Change is unequivocal. Therefore, planning for the future is planning for change. Change implies ambiguities, conflicts, stress.

This mandates an even more intensified effort toward the process of planning and organizing now to educate for vocational change. Futurists predict notable, rapid and complex changes for the next few decades both in the nature of the work force, the work content, and management and training methodologies. Demographic studies indicate more women and older workers in a work force swelled by the arrival of the baby boom generation. Developments such as these pose crucial problems for organizations. Each population has different needs and values which they expect to be satisfied by the work setting. More people are acquiring a better education (one out of four in 1980 will have a college education) and expect to enter the labor market at more complex job levels providing greater challenges. Will those jobs exist in sufficient numbers? If not, will there be increased numbers of dissatisfied workers? One of the crucial dimensions of job satisfaction is the opportunity to utilize one's cognitive abilities in an environment which satisfies those needs. Job enrichment and responsibilities in decision making processes are being furnished by corporate management to encourage the maximum utilization of skills and capacities to meet individual needs. A shortage of entry level workers is projected in the next decade or two. Will these practices intensify or alleviate labor problems?

Mandatory retirement has shifted from age sixty-five to seventy and may be completely abolished in the future. Will this affect employment opportunities for younger people? Will this limit promotional patterns? Will this create conflict between older and younger generations at work?

Changes in the nature of future work are projected in which roles of workers may not be as well defined, team identification and participation without specific job titles will be the predominant work mode, new supervisor expectations will occur, and alternative work patterns and schedules will be adopted. Training for these anticipated changes needs to occur in order to attenuate worker stress due to role conflict and ambiguity. Management practices must be modified in order to be more sensitive to workers' needs, aspirations and values. Managers will also require assistance in coping with the "new workers."

What does "futuring" mean for vocational education in terms of helping people deal with occupational stress? It means, on the basis of an accurate assessment of present conditions, planning and implementing future programs that provide workers not only with job skills, but with analytical competencies, interpersonal adroitness, and coping proficiencies. Learning to detect potentially stressful situations and coping with anticipated job stressors will improve the worker's total effectiveness. A review of twenty-four postsecondary catalogs showed no evidence that vocational students were required to enroll in courses designed to orient them to organization life or the management of stress. Learning how to assess the structure and dynamics of an organization -- its technology, organizational climate, morale, unions -- should be an integral part of a vocational training program. Some students serve apprenticeships or engage in cooperative work experiences which exposes them to some work elements. Unfortunately, novices don't often possess the skills to accurately assess work dynamics,

and they are often reluctant to query existing practices. A course using a case study approach could be extremely beneficial to students prior to graduation from any vocational program. The content covered could include understanding organizational goals and the corporate hierarchy, reading and comprehending job descriptions, knowing individual rights, becoming aware of promotional opportunities -- all aspects of the organization which would reduce ambiguity. Vocational educators focus on training skilled workers, but seriously neglect some of the critical aspects related to the potential worker's mental and physical well-being.

Social intervention is defined as a method aimed at increasing an individual's effective participation in the labor force. To maximize learned functional skills, a process of adaptation and accomodation must occur. Ideally, "an individual's functional skills will ordinarily be most efficiently applied and utilized when his adaptive skills are closely attuned to specific organizational conditions and requirements." (Dunnette, Hough, Rosett, Mumford and Fine, 1973). A good P-E fit-adaptability and accomodation between an individual and an organization should be compatible and mutually flexible. A close alliance between vocational education and business and industry would assist both segments to prepare people to enter specific jobs in certain organizations. Graduation from a vocational training program requires adjustments, many revolving around contradictions between the academic environment and the work site. Corwin (1961) described discrepancies between ideal role conceptions acquire in nurses' training and the complexities associated with practice in a hospital.

When nurses graduate they are confronted with three new roles: (1) a hospital employee (bureaucrat), (2) a responsible professional, and (3) a public servant (humanitarian). All three roles required different loyalties -- the hospital administration, professional principles and associations, and the patient. Corwin tested three hypotheses: "(1) Do bureaucratic and professional conceptions of role conflict? (2) Are there systematic differences in the organization of roles produced by diploma and degree programs? (3) Do discrepancies between ideal roles and perceptions of the reality increase after graduation?" He found that mutually held bureaucratic and professional conceptions of role prohibit adequate fulfillment of either role. Degree nurses maintain higher professional and less bureaucratic conceptions than do diploma nurses. The professional allegiance appears to decline in diploma nurses after graduation. These results should prove interesting to vocational educators. The new changes emerging in titles and duties of nurses in the near future bears careful scrutiny. Adaptation, accomodation, role conflict, and role ambiguity are all behaviors and conditions that exist in medical settings and need to be handled effectively in order to reduce strain.

The remainder of this chapter is devoted to techniques which have been employed to manage stress in individuals and organizations. Only limited attention will be given to organizational techniques since vocational educators interact mainly with entry level students and those needing skill upgrading or retraining.

Newman and Beehr (1979) conducted an extensive review of the literature pertaining to person and organizational strategies for

handling stress. They define adaptive response to job stress as "a response intended to eliminate, ameliorate, or change the stress producing factors in the job content or intended to modify, in a beneficial way, the individual's reaction to the stressful job situation." A three dimensional model was designed using twelve cells to denote whether the adaptive response was made by the person, organization, or outside; if it was curative or preventive; and if it was the primary target. Although each of the strategies for handling stress seems to be successful for some individuals, there is little empirical evidence that any one is better than another. Evaluation studies are essential both for people and organizations.

Causal agents of stress can be centered in either the person or environment. Newman and Beehr (1970) discuss personal strategies from the viewpoint of changing a person's psychological or physical state, altering behavior, or modifying the work environment. Some methods that can be used to teach persons to cope effectively with stressful situations are as follows:

1. Meditation and relaxation techniques are methods used to alter psychological states by reducing anxiety. There is minimal evidence, other than self report, that their effects do improve job satisfaction and performance. Benson (1974) expounds on the therapeutic value of the 'relaxation response.' He claims it is beneficial for lowering blood pressure in hypersensitive persons and reducing smoking, drinking, and drug abuse which had previously been used as stress reducers.

2. Advanced planning. A thorough analysis of future events and their consequences permits an individual to prepare appropriate responses for potential stress conditions. Role playing is one method used to reduce stress through rehearsing future events such as a job interview.

3. Reassessment of self and life. A reassessment of primary occupational goals allows a person to reflect on the quality of life most important to a desired life style. High pressure jobs are often forfeited in order to enjoy life's activities which have a higher priority. An honest self-analysis can provide reassurances of strengths and weaknesses and tends to give meaning and direction to life's goals. Selye (1974) states: "we must, at all cost, avoid frustrations, the humiliation of failure; we must not aim too high and undertake tasks which are beyond us. Everyone has his own limits." (p. 111)

4. Diet and exercise. Today's popular literature is replete with articles extolling the advantages of proper diet and exercise. Ample evidence appears to exist that nutrition and exercise reduce the negative effects of stress. Many large corporations have built exercise rooms for employees to use.

5. Social support. When individuals begin a new job they usually experience an identity crisis. They seek out groups within the organization with similar jobs as supportive agents. Steiner (1974) proposed and tested four strategies for reducing stress in interpersonal relations:

    1. adjust opinions to agree with an associate's judgments (conform);

    2. reject the associate as less competent than he was originally thought to be;

    3. devaluate the importance of the issue about which disagreements have occurred; or

    4. under-recall the frequency or extent of the disagreements. (p. 183)

The conclusion suggest that adopting a single response strategy will be more effective in reducing stress than a variety of response patterns.

Organizations are becoming acutely aware of the damaging effects stress can have on employees and company effectiveness. The early detection of stress-producing situations and symptons is critical. Preventive measures can then be employed to allay the harmful stress effects. Some of the preventive measures

organizations can take are: (1) reorganize to change roles and possibly decentralize; (2) improve communication networks; (3) increase participation; (4) redesign jobs; (5) modify personnel practices of selection and placement; and (6) alter the physical surroundings.

As stated earlier in this paper, vocational education normally deals primarily with potential workers. Therefore, it is of primary importance that the focus of attention be directed to helping people develop effective coping strategies to deal with occupational stressors. It is helpful for students to be knowledgeable about what organizations do to reduce stress. For the purpose of this paper, however, helping students to understand the origins of occupational stressors as they relate to job satisfaction is the major objective.

Summary and Conclusions

Vocational educators who are planning and organizing for future programs should be aware of the determinants of job satisfaction. Follow-up studies should include items that are designed to detect stressors and the individual's methods of reducing strain. Vocational education should include in all programs requirements for courses in which the content teaches about organizations and how to adapt and deal effectively with occupational stressors and their resultant strains.

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